



SEQUENCE LISTING

<120> University of Kentucky Research Foundation
Hildebrand, David
Hatanaka, Tomoko

<120> RECOMBINANT STOKESIA EPOXYGENASE GENE

<130> 050229-0377

<140> 10/622,774

<141> 2003-07-21

<150> 60/396,406

<151> 2002-07-19

<160> 10

<170> PatentIn version 3.2

<210> 1

<211> 1406

<212> DNA

<213> Stokesia laevis

<400> 1

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agatcatgat atggacgaac gagcccccgtat tgatccggcg ccattctcgtaaagtgtatct 180

aaagaaaagca atccctgcac attgcttccg gcgatccgccc gtctggtcat cctgctacgt 240

agttcaggat ctcattatca ccttcctttt atacacggtc gccaacacct acattcctca 300

cctccctcct cctctagttt acttagcatg gccggtttac tggtttgcc aatcttgcatt 360

cctcactggat ttatgggtcc tcggccatga atgcggccat catgcctta gtgagttacca 420

gtggattgtat aacgcgcgttg gattcgtcct ccattcggct ctcctcaccc cttactttc 480

ttggaaatac agccatcgaa agcaccatgc aaacacaaat tcactcgaaa acgaggaagt 540

ttacattcct agaactcagt cccagctcag gacttactcc acatacgaat ttcttgacaa 600

cacgcctggat cgaatcctca tcttggtcat catgttaacc ttaggatttc cttaatacct 660

cttaacgaat gttcaggca agaagtacga tagatttacc aaccactttg atccattgag 720

cccgatcttc accgagcgtg agcgaatcca ggttgcgtta tcagatcttgcgtatcg 780

agtgttttac ggactcaagt ttcttgcata aacaaaagga tttgggtggg tgatgtgcatt 840

gtatggagtt ccagtgtatag gtctgaatttc ctgcattatc gtaatcactt atctgcacca 900

cacacatctg tcgtcacccccc attacgattc aaccgaatgg aactggatca aaggagcctt 960

gaccacaatc gacagagatt tcggtctcct gaatcggtt ttccacgacg ttacacacac 1020
ccacgtgttgcaccatttgcaccat tccacattat catgcaaagg aggcaagcga 1080
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aatgtggaga gaggccaagg aatgcattt catcgagcaa gatgcagacaa gcaagcacaa 1200
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tgcagcatcc ctttgtatg cttgaatcgt tctatattttt tatatgtttt gtaagataaa 1320
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<210> 2
<211> 378
<212> PRT
<213> Stokesia laevis

<400> 2

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Ala Ile Pro Ala His Cys Phe Arg Arg Ser Ala Val Trp Ser Ser Cys
35 40 45

Tyr Val Val Gln Asp Leu Ile Ile Thr Phe Leu Leu Tyr Thr Val Ala
50 55 60

Asn Thr Tyr Ile Pro His Leu Pro Pro Pro Leu Val Tyr Leu Ala Trp
65 70 75 80

Pro Val Tyr Trp Phe Cys Gln Ser Cys Ile Leu Thr Gly Leu Trp Val
85 90 95

Leu Gly His Glu Cys Gly His His Ala Phe Ser Glu Tyr Gln Trp Ile
100 105 110

Asp Asn Ala Val Gly Phe Val Leu His Ser Ala Leu Leu Thr Pro Tyr
115 120 125

Phe Ser Trp Lys Tyr Ser His Arg Lys His His Ala Asn Thr Asn Ser
130 135 140

Leu Glu Asn Glu Glu Val Tyr Ile Pro Arg Thr Gln Ser Gln Leu Arg
145 150 155 160

Thr Tyr Ser Thr Tyr Glu Phe Leu Asp Asn Thr Pro Gly Arg Ile Leu
165 170 175

Ile Leu Val Ile Met Leu Thr Leu Gly Phe Pro Leu Tyr Leu Leu Thr
180 185 190

Asn Val Ser Gly Lys Lys Tyr Asp Arg Phe Thr Asn His Phe Asp Pro
195 200 205

Leu Ser Pro Ile Phe Thr Glu Arg Glu Arg Ile Gln Val Ala Leu Ser
210 215 220

Asp Leu Gly Ile Val Ala Val Phe Tyr Gly Leu Lys Phe Leu Val Gln
225 230 235 240

Thr Lys Gly Phe Gly Trp Val Met Cys Met Tyr Gly Val Pro Val Ile
245 250 255

Gly Leu Asn Ser Phe Ile Ile Val Ile Thr Tyr Leu His His Thr His
260 265 270

Leu Ser Ser Pro His Tyr Asp Ser Thr Glu Trp Asn Trp Ile Lys Gly
275 280 285

Ala Leu Thr Thr Ile Asp Arg Asp Phe Gly Leu Leu Asn Arg Val Phe
290 295 300

His Asp Val Thr His Thr His Val Leu His His Leu Phe Pro Tyr Ile
305 310 315 320

Pro His Tyr His Ala Lys Glu Ala Ser Glu Ala Ile Lys Pro Ile Leu
325 330 335

Gly Asp Tyr Arg Met Ile Asp Arg Thr Pro Phe Phe Lys Ala Met Trp
340 345 350

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355

360

365

His Lys Gly Thr Tyr Trp Tyr His Lys Met
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<400> 3

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<210> 4
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<211> 32
<212> DNA
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32

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| <211> | 37 | |
| <212> | DNA | |
| <213> | Artificial Sequence | |
| <220> | | |
| <223> | Artificial StexpR primer of unknown origin | |
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| <210> | 9 | |
| <211> | 1364 | |
| <212> | DNA | |
| <213> | Veronia galamensis | |
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| | tgtatgatc atgatcagct ggtgaaagat gatcataata taaacgaacg tgcaccgggt | 180 |
| | gatgcggcac cattctcggtt aagcgatcta aagaaagcaa tccctccgca ttgcttccag | 240 |
| | cgcattctgcca tccgttcatc gtgctacgtt gttcaggatc tcattattac cttcctttta | 300 |
| | tacacgctcg ccaactctta cattcctctt cttcctcctc ctctacctta cttagcatgg | 360 |
| | cctgtttact ggtttgcca atcttcgatc ctcactgggtt tatgggtcat tggccatgaa | 420 |
| | tgtggccatc atgcttatag tgagtaccag tgggttgata acaccgttgg attcatcctc | 480 |
| | cattccttcc ttctcacacc ttactttct tggaaataca gccatcgaaa gcaccatgcc | 540 |
| | aacacgaatt cactcgaaaaa cgaggaggtt tacattccta aagccaagtc ccagctcagg | 600 |
| | aattactcca atttcaaatt tcttgacaac acccctggtc gaatcttcat tttgcttatac | 660 |
| | atgttgacct tgggctttcc ttatacctc ttgaccaata tttcaggcaa gaaataccaa | 720 |
| | aggtttgcca accactttga tccgttgagc cccatctca gtgagcgtga acgaatccag | 780 |
| | gtcgtgctat cggatgtggg tctcattgct gtgtttacg ggcttaagtt tcttgtagcg | 840 |
| | aaaaaaagggt tcgggtgggt aatgcgcgtg tacggagccc cagtggttgg gctgaatgcc | 900 |
| | ttcataataa tgatcactta tctccaccac acccatctgt cttcgccctca ttacgattcg | 960 |
| | accgaatgga actggatcaa aggagccttg actacaatcg atagagattt cggtctcctg | 1020 |
| | aatagggtgt tccatgacgt cactcacaca cacgtgtgc atcatttgc cccgtacatt | 1080 |
| | ccacattatc atgcaaagga ggcgagcgtac gcaataaagc cggtgtttagg ggagtatcg | 1140 |

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| atgatcgata ggactccgtt ttacaaagca atgtggagag aggcgaaggaa atgcatctac | 1200 |
| atcgagccag atgaagataa gaagcacaaa ggtgtatatt ggtaccataa aatgtgatac | 1260 |
| gagctgagta cgttagtacgt tgtatgcttt tgtaacgttt tgtaagataa ataaataaat | 1320 |
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<210> 10
 <211> 1344
 <212> DNA
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| agcaagcaat ccctccccat tgctccaga gatctgtaat ccgctcatct tactatgtt | 180 |
| ttcaagatct cattattgcc tacatcttct acttccttgc caacacatat atccctactc | 240 |
| ttcctactag tctagcctac ttagcttggc ccgttactg gttctgtcaa gctagcgtcc | 300 |
| tcactggctt atggatcctc ggccacgaat gtggtcacca tgcctttagc aactacacat | 360 |
| ggttgacga cactgtggc ttcatcctcc actcatttct cctcaccctt tatttctt | 420 |
| ggaaattcag tcaccggaat caccattcca acacaagttc gattgataac gatgaagttt | 480 |
| acattccgaa aagcaagtcc aaactcgccg gtatctataa acttcttaac aaccacactg | 540 |
| gtcggctgtt ggtttgatt atcatgttca ccctaggatt tcctttatac ctcttgacaa | 600 |
| atattccgg caagaaatac gacaggttt ccaaccactt cgaccctatg agtccaattt | 660 |
| tcaaagaacg tgagcggtt caggtcttcc tttcgatct tggtcttctt gccgtgttt | 720 |
| atggaattaa agttgctgta gcaaataaag gagctgcttgc ggtagcgtgc atgtatggag | 780 |
| ttccggattt aggctgtt accttttcg atgtatcac cttcttgac cacacccatc | 840 |
| agtcgtcgcc tcattatgtat tcaactgaat ggaactggat cagaggggcc ttgtcagcaa | 900 |
| tcgataggga ctggattt ctgaatagtg tttccatga tggtacacac actcatgtca | 960 |
| tgcatttgcattt gtttgcatac attccacact atcatgcaaa ggaggcaagg gatgcaatca | 1020 |
| agccaatctt gggcgacttt tatatgatcg acaggactcc aattttaaaa gcaatgtgga | 1080 |
| gagagggcag ggagtgcatt tacatcgagc ctgatagcaa gctcaaaggt gtttattgg | 1140 |
| atcataaattt gtgatcatat gcaaaatgca catgcatttt caaaccctct agttacgtt | 1200 |
| gttctatgtat gataaaaccg ccggcctttt gttgactat gcctaagcca ggcgaaacag | 1260 |

ttaaataata tcggtatgat gtgtaatgaa agtatgtggt tgtctggtt tgttgctatg 1320
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